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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,736	11/20/2003	Scott E. Black	BO1 - 0019US	8708
60483	7590	12/14/2007	EXAMINER	
LEE & HAYES, PLLC 421 W. RIVERSIDE AVE. SUITE 500 SPOKANE, WA 99201			LAU, TUNG S	
			ART UNIT	PAPER NUMBER
			2863	
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			12/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/717,736

Applicant(s)

BLACK ET AL.

Examiner

Tung S. Lau

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 18-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/01/2007 has been entered.

Election/Restrictions

2. Claims 18-23 stand withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention as noted on 05/18/2006.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 14, and 15 are rejected

under 35 U.S.C. 102(b) as being anticipated by Raymond J. Anderson,

McDonnell Douglas Corporation, St. Louis (Lab testing of neural networks for improving aircraft onboard-diagnostics on flight-ready hardware, processing

Annual Reliability and Maintainability Symposium 1993, 0149.144X/93, IEEE
1993, page 404-410).

Regarding claim 1:

Raymond J. Anderson describes a method of operating a product, comprising: monitoring a first diagnostic information of a component of the product (fig. 3, relay 1); monitoring a second diagnostic information of a system of the product (fig. 3, relay 2), the system including the component wherein the second diagnostic information does not include the first diagnostic information (fig. 3, relay 1 and 2 are separate); combining the first diagnostic information of the component and the second diagnostic information of the system (fig. 3, different layer); reconfiguring at least one of the component and the system to compensate during a flight if the combined first and second diagnostic information indicates a degradation of the component (page 404).

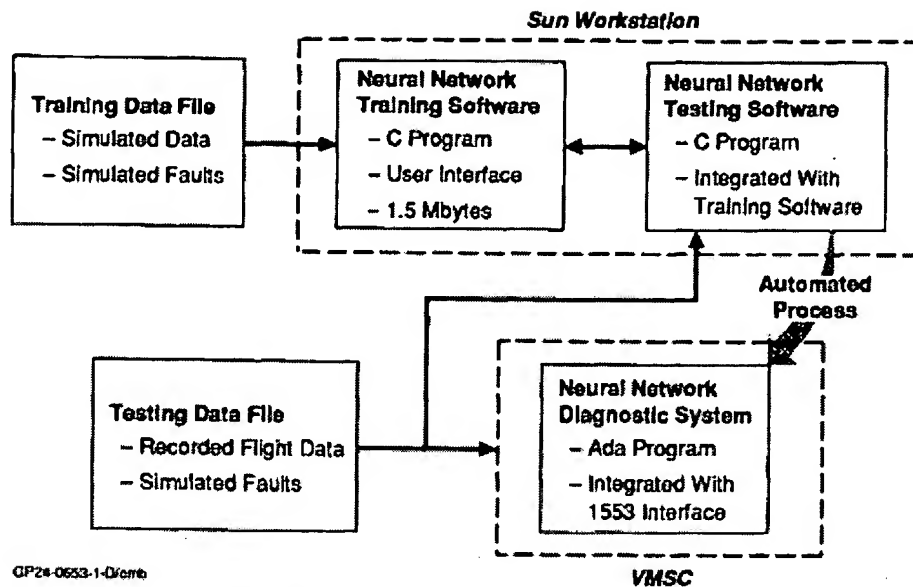


Figure 1. Neural Network Development and Delivery Environment

Regarding claim 2, Raymond J. Anderson further describes monitoring a first diagnostic information of a component includes monitoring a health indication of the component (page 404).

Regarding claim 3, Raymond J. Anderson further describes monitoring a first diagnostic information of a component includes monitoring a capability indication of the component (page 404).

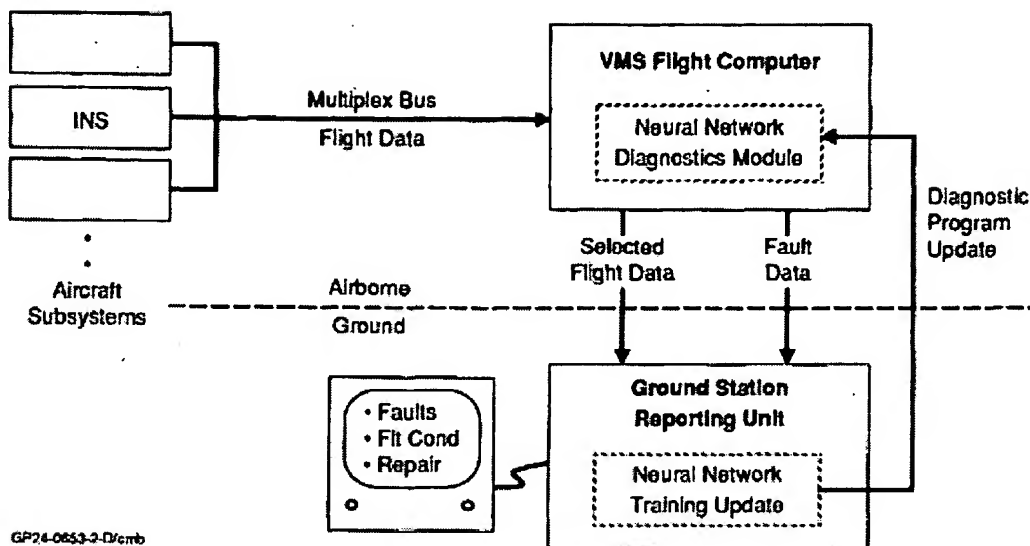


Figure 2. Vehicle Management System: NN Fault Diagnostics Demonstration

Regarding claim 4, Raymond J. Anderson further describes monitoring a first diagnostic information of a component includes monitoring a reliability indication of the component (page 404).

Regarding claim 5, Raymond J. Anderson further describes monitoring a information of a component includes monitoring a first diagnostic information of an actuator (page 407).

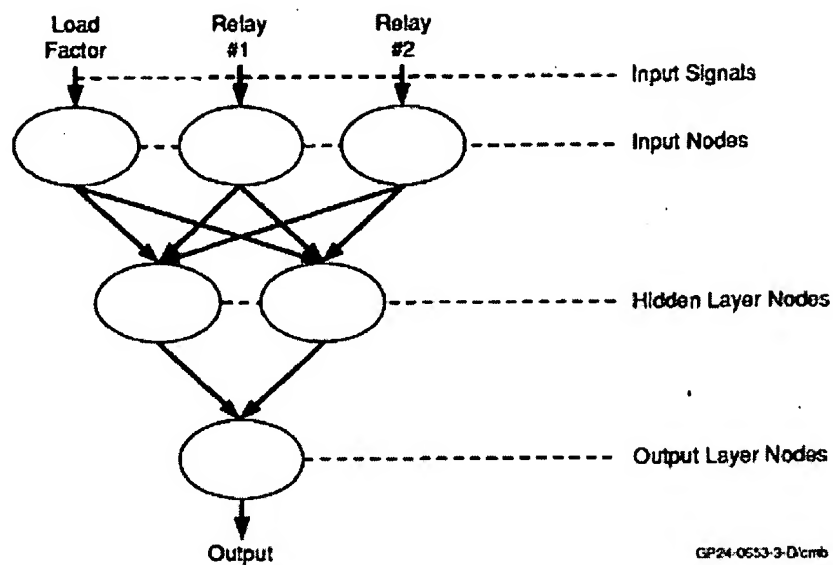


Figure 3. Hierarchical Structure of Backpropagation Network
Each Node in Network Performs Simple Processing and Then Passes its Information on to Other Nodes

Regarding claim 6, Raymond J. Anderson further describes monitoring a second diagnostic information of a system includes monitoring a health indication of the system (page 404).

Regarding claim 7, Raymond J. Anderson further describes monitoring a second diagnostic information of a component includes monitoring a capability indication of the component (page 407).

Regarding claim 8, Raymond J. Anderson further describes monitoring a second diagnostic information of a component includes monitoring a reliability indication of the component (page 404).

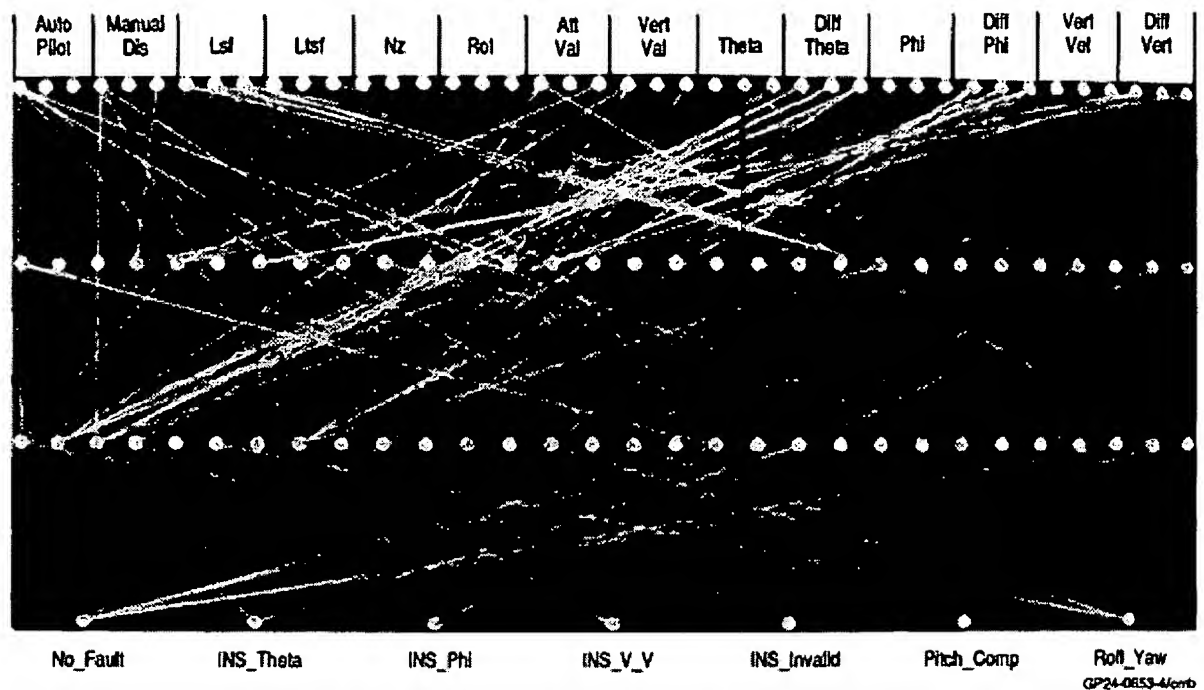


Figure 4. Neural Network for Fault Diagnostics of the F-15 Inertial Navigation System

Regarding claim 9, Raymond J. Anderson further describes monitoring a second diagnostic information of a system includes monitoring a second diagnostic information of a flight control system (page 404).

Regarding claim 10, Raymond J. Anderson further describes reconfiguring at least one of the component and the system includes reconfiguring a flight control system to take into account a degradation of an actuator (page 404, 407).

Regarding claim 11, Raymond J. Anderson further describes feeding back the reconfiguring of the at least one of the component and the system into the fusion of the first and second diagnostic information (fig. 1, unit 8).

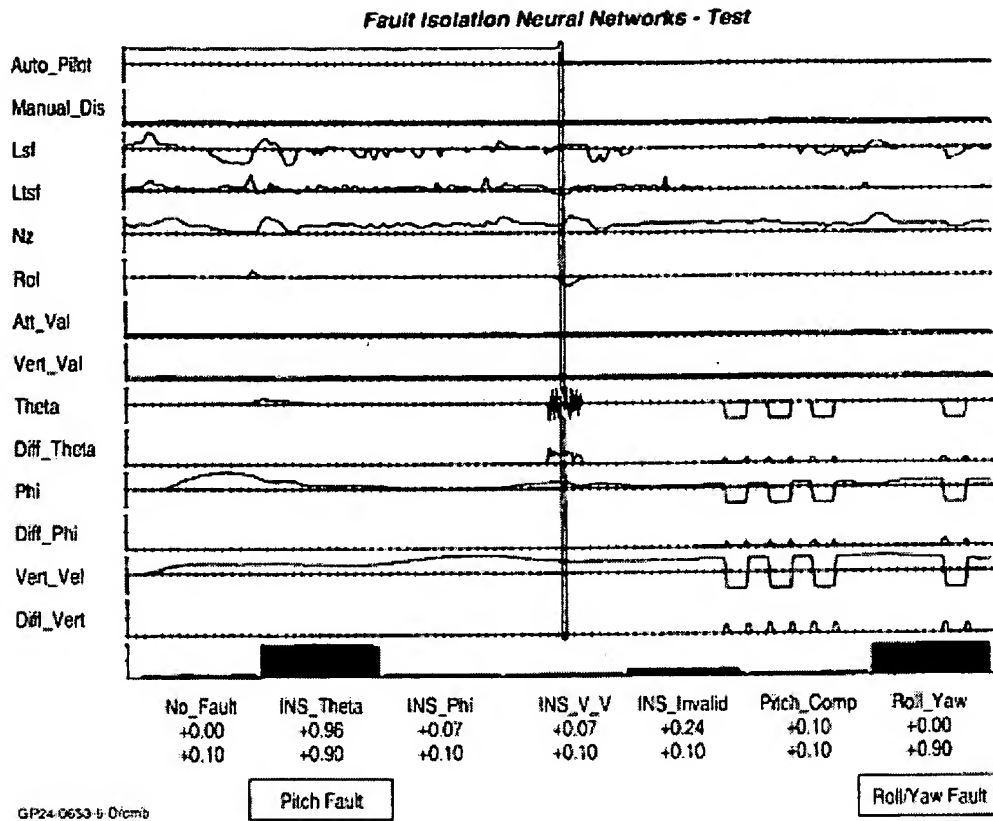


Figure 5. Fault Isolation of Multiple Faults Using Flight Data Parameters

Regarding claim 12, Raymond J. Anderson further describes inputting the combined first and second diagnostic information into a maintenance support block (page 404).

Regarding claim 13, Raymond J. Anderson further describes inputting the combined first and second diagnostic information into a maintenance support block includes inputting the combined first and second diagnostic information into the maintenance support block to at least one of enable post-flight analysis and

interpretation, and assist in assessing the prognosis of the component and system (page 404, 405).

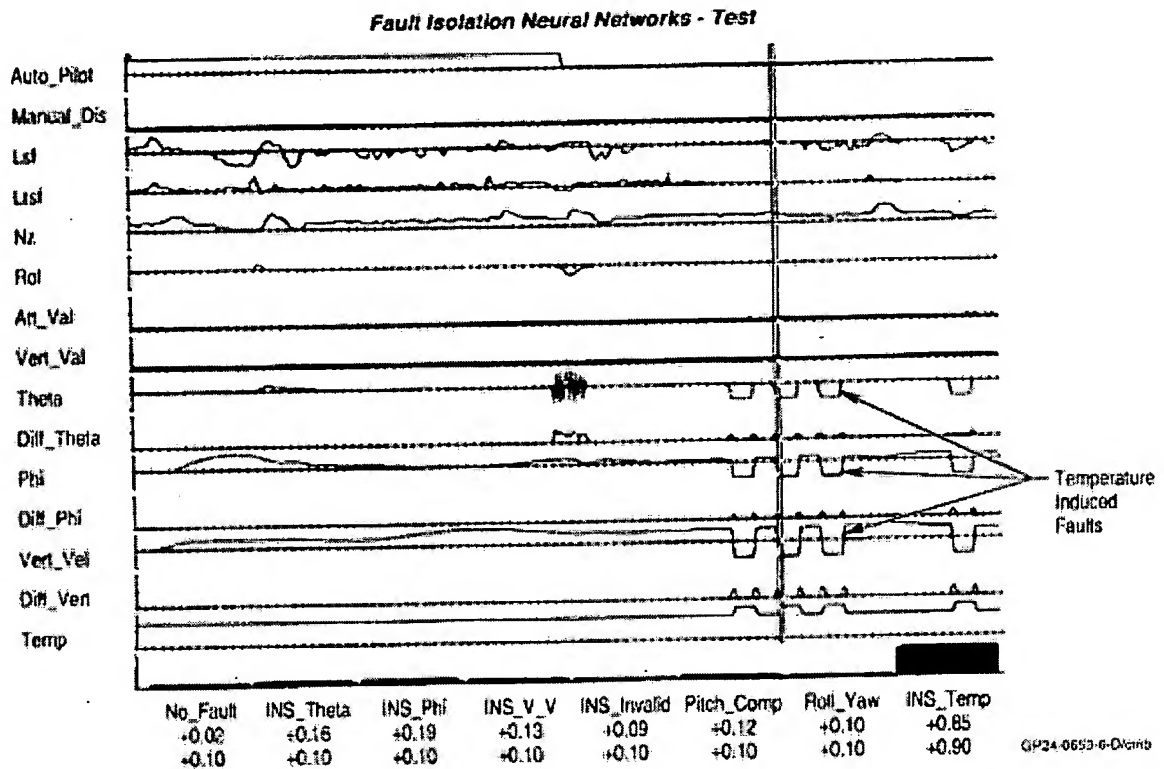


Figure 6. In Field Learning for Diagnostics of INS Temperature Related Faults

Regarding claim 16, Raymond J. Anderson further describes reconfiguring at least one of the component and the system includes reconfiguring at least one of the component and the system using an integrated vehicle health management system (page 404, 405, fig. 6).

Regarding claim 17, Raymond J. Anderson further describes integrating an integrated vehicle health management system will reconfigurable control (page

404), and performing tests of at least one of the component and the system during actual operation of the product (page 404).

Regarding claim 14, Raymond J. Anderson further describes detecting a level of degradation of the component that can be used to reduce false alarms in a Built-In Test system (page 404).

Regarding claim 15, Raymond J. Anderson further describes trending one or more degradations to provide a prognostic capability (page 405, 406).

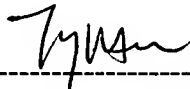
Response to Arguments

4. Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection. However, applicant's arguments filed 10/01/2007 have been fully considered but they are not persuasive.

Contact information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S. Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tung S. Lau, AU 2863
Primary Examiner
November 29, 2007